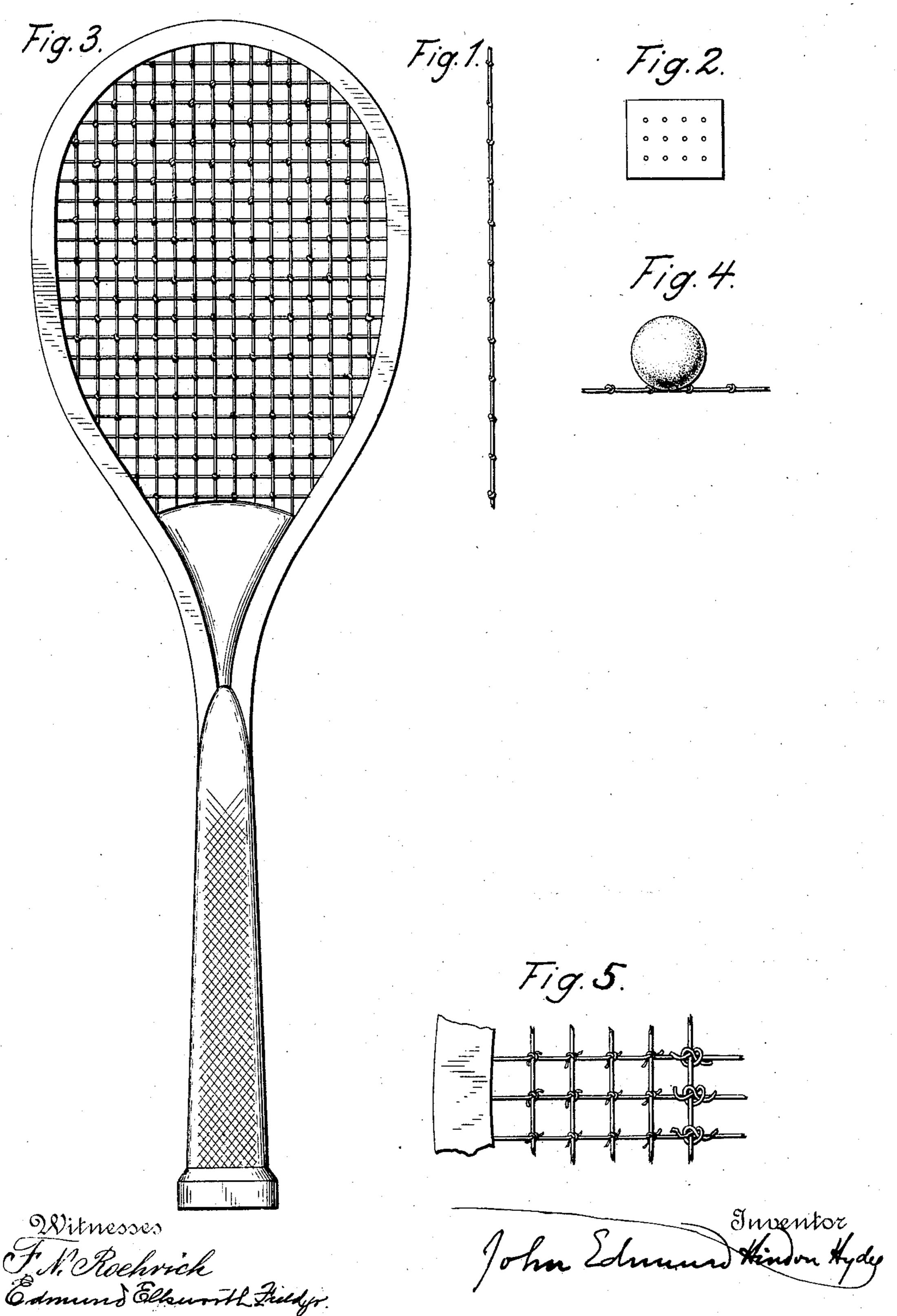
J. E. H. HYDE. TENNIS RACKET. APPLICATION FILED OCT. 26, 1903.

NO MODEL.



United States Patent Office.

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TENNIS-RACKET.

SPECIFICATION forming part of Letters Patent No. 763,059, dated June 21, 1904.

Application filed October 26, 1903. Serial No. 178,462. (No model.)

To all whom it may concern:

Be it known that I, John Edmund Hindon Hyde, a citizen of the United States, residing in the city of New York, borough of Queens, and State of New York, have invented a new and useful Improvement in Tennis-Rackets, of which the following is a specification.

My invention relates to the production of a new article of manufacture, which consists of a racket used for playing tennis, (either lawn-tennis or court-tennis,) or rackets, or similar games in which the playing-surface consists of lengths of gut or string, which have knots made in such lengths of gut or string at intervals, but which are not interknotted together.

The object of my invention is to produce a racket having an uneven playing-surface formed by projections thereon, whereby a cut or rotary motion can be more readily imparted to the ball than is now possible with the rackets in general use, while accurate direction can be better given to a driven ball

in "placing."

My invention is illustrated in the accompa-

nying drawings, in which—

Figure 1 shows a string or gut length knotted upon itself only at intervals. Fig. 2 is a diagrammatic view showing the prefer-30 able location of the knots upon the playingsurface. Fig. 3 is a perspective view of a racket having a playing-surface consisting of knotted strings. Fig. 4 illustrates the position of the ball in its impact upon the play-35 ing-surface between adjacent knots. Fig. 5 shows a possible, but inferior, modification in which the knots are made by tying short separate pieces of string or gut around the crossing-points of the longitudinal and lati-40 tudinal strings. The particular kind of knot which is to be tied in the strings or gut may of course be varied, provided it is sufficiently large to insure an efficient hold on the ball and presents substantially the same projection on each side of the racket. I have found what is called a "double" knot to be efficient.

A modified, but, I think, inferior, result may be produced by tying short separate lengths of gut or string around the longitudinal and latitudinal strings at their crossing- 50 points; but in such case the knots must have the characteristics described, while they must not tie the crossing-strings together in such manner that the strength of one string is dependent upon that of the other. Thus I am 55 aware that it has been proposed to construct a racket with a playing-surface consisting of a large number of gut strings netted together toward the center in curves and laced into the frame of the racket around the periphery of 60 the network. Such a construction as this would not be within my invention and is open to insuperable objections. The ordinary netting knot proposed in such case would not be suitable for my purpose, while netting the 65 strings together of itself prevents every string from being stretched tight in every portion at the same time that it makes each string dependent upon every other, so that if one string breaks all the others become loosened. 70 Not only is this looseness fatal, but to restring a racket having a network playingsurface requires a renewal of the entire net. In my construction, on the other hand, each longitudinal string must be stretched inde- 75 pendently of the latitudinal strings, and the converse.

In practicing my invention to the best advantage either each of the longitudinal strings or latitudinal strings, or both, should be stretched 80 (either dry or moist) and then knotted upon itself at suitable intervals, then stretched so as to draw the knots very tight, and then the strings interlaced through the rim of the racket and each other in the method now 85 commonly practiced with plain unknotted strings.

In the modification suggested and illustrated in Fig. 5, in which separate pieces of gut are used to make the knots, it will be observed 90 that the strings are separately and independently stretched, so that if a knot should break

or wear out the stretched strings would not be affected, while if one string should break no other string would be affected.

Having thus described my invention, what

5 I claim is—

1. A racket having a playing-surface consisting of independently-adjustable strings having knots thereon at intervals, substantially as described.

2. A racket having a playing-surface consisting of independently-adjustable crossed gut or strings and projections carried by said strings at crossing-points, substantially as described.

J. E. HINDON HYDE.

Witnesses:

James J. Cosgrove, John E. Judge.